

CLAIMS

What is claimed is:

- 5 1. A method for combining a plurality of digital video signals, a plurality of digital data signals, and a plurality of upstream communications in a digital headend, comprising:
- providing a video interface for receiving said plurality of digital video signals within said digital headend;
- 10 providing a data interface for receiving said plurality of digital data signals within said digital headend;
- providing an upstream communications interface for receiving said plurality of upstream communications within said digital headend;
- buffering said plurality of digital video signals within said digital headend;
- 15 generating a buffered plurality of digital video signals;
- buffering said plurality of digital data signals within said digital headend;
- generating a buffered plurality of digital data signals; and
- communicating said buffered plurality of digital video signals, said buffered plurality of digital data signals, and said plurality of upstream communications across a
- 20 common shared bus.

2. The method of claim 1 further comprising, generating said plurality of upstream communications with at least one set-top box.

3. The method of claim 2 further comprising, generating said plurality of upstream
5 communication with a distribution system.

4. The method of claim 2 further comprising optimizing communications for said buffered plurality of digital video signals, said buffered plurality of digital data signals, and said plurality of upstream communications across said common shared bus.

5. The method of claim 4 further comprising digitally processing said plurality of digital video signals prior to buffering said plurality of digital video signals.

6. The method of claim 5 further comprising digitally processing said plurality of digital data signals prior to buffering said plurality of digital data signals.

7. A method for combining a plurality of digital data signals, a plurality of voice signals, and a plurality of upstream communications in a digital headend, comprising:
providing a data interface for receiving said plurality of digital data signals within
20 said digital headend;
providing a voice interface for receiving said plurality of voice signals within said digital headend;

providing an upstream communications interface for receiving said plurality of upstream communications within said digital headend;

buffering said plurality of digital data signals within said digital headend;

generating a buffered plurality of digital data signals;

5 buffering said plurality of voice signals within said digital headend;

generating a buffered plurality of voice signals; and

communicating said buffered plurality of digital data signals, said buffered plurality of voice signals, and said plurality of upstream communications across a common shared bus.

10 8. The method of claim 7 further comprising, generating said plurality of upstream communications with at least one set-top box.

15 9. The method of claim 8 further comprising, generating said plurality of upstream communication with a distribution system.

10. The method of claim 8 further comprising optimizing communications for said buffered plurality of digital data signals, said buffered plurality of voice signals, and said plurality of upstream communications across said common shared bus.

20 11. The method of claim 10 further comprising digitally processing said plurality of digital data signals prior to buffering said plurality of digital data signals.

12. The method of claim 11 further comprising digitally processing said plurality of voice signals prior to buffering said plurality of voice signals.

5 13. A method for combining a plurality of digital video signals, a plurality of voice signals, and a plurality of upstream communications in a digital headend, comprising:

providing a video interface for receiving said plurality of digital video signals within said digital headend;

10 providing a voice interface for receiving said plurality of voice signals within said digital headend;

providing an upstream communications interface for receiving said plurality of upstream communications within said digital headend;

buffering said plurality of digital video signals within said digital headend;

generating a buffered plurality of digital video signals;

15 buffering said plurality of voice signals within said digital headend;

generating a buffered plurality of voice signals; and

communicating said buffered plurality of digital video signals, said buffered plurality of voice signals, and said plurality of upstream communications across a common shared bus.

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14. The method of claim 13 further comprising, generating said plurality of upstream communications with at least one set-top box.

15. The method of claim 14 further comprising, generating said plurality of upstream communication with a distribution system.

5 16. The method of claim 14 further comprising optimizing communications for said buffered plurality of digital video signals, said buffered plurality of voice signals, and said plurality of upstream communications across said common shared bus.

10 17. The method of claim 4 further comprising digitally processing said plurality of digital video signals prior to buffering said plurality of digital video signals.

18. The method of claim 5 further comprising digitally processing said plurality of voice signals prior to buffering said plurality of voice signals.

15 19. A method for combining a plurality of digital video signals, a plurality of digital data signals, a plurality of voice signals, and a plurality of upstream communications within a digital headend, comprising:

providing a video interface for receiving said plurality of digital video signals within a digital headend;

20 providing a data interface for receiving said plurality of digital data signals within a digital headend;

providing a voice interface for receiving said plurality of voice signals within a digital headend;

providing an upstream communications interface for receiving said plurality of upstream communications within said digital headend;

5 buffering said plurality of digital video signals within said digital headend;

generating a buffered plurality of digital video signals;

buffering said plurality of digital data signals within said digital headend;

generating a buffered plurality of digital data signals;

buffering said plurality of voice signals within said digital headend;

10 generating a buffered plurality of voice signals; and

communicating said buffered plurality of digital video signals, said buffered plurality of digital data signals, said buffered plurality of voice signals, and said plurality of upstream communications across a common shared bus.

15 20. The method of claim 19 further comprising, generating said plurality of upstream communications with at least one set-top box.

21. The method of claim 20 further comprising, generating said plurality of upstream communication with a distribution system.

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22. The method of claim 20 further comprising optimizing communications for said buffered plurality of digital video signals, said buffered plurality of digital data signals,

said buffered plurality of voice signals and said plurality of upstream communications across said common shared bus.

23. The method of claim 22 further comprising digitally processing said plurality of digital video signals prior to buffering said plurality of digital video signals.

24. The method of claim 23 further comprising digitally processing said plurality of digital data signals prior to buffering said plurality of digital data signals.

25. The method of claim 24 further comprising digitally processing said plurality of voice signals prior to buffering said plurality of voice signals.

26. A method for combining a plurality of digital video signals, a plurality of digital data signals, a plurality of voice signals, and a plurality of upstream communications within a digital headend, comprising:

providing a video interface for receiving said plurality of digital video signals within said digital headend;

providing a data interface for receiving said plurality of digital data signals within said digital headend;

providing a voice interface for receiving said plurality of voice signals within said digital headend;

providing an upstream communications interface for receiving said plurality of upstream communications wherein said plurality of upstream communications are generated by least one set-top box.

digitally processing said plurality of digital video signals within said digital

5 headend;

digitally processing said plurality of digital data signals within said digital

headend;

digitally processing said plurality of voice signals within said digital headend;

buffering said plurality of digital video signals within said digital headend;

10 generating a buffered plurality of digital video signals;

buffering said plurality of digital data signals within said digital headend;

generating a buffered plurality of digital data signals;

buffering said plurality of voice signals within said digital headend;

generating a buffered plurality of voice signals; and

15 communicating said buffered plurality of digital video signals, said buffered

plurality of digital data signals, said buffered plurality of voice signals, and said plurality of upstream communications across a common shared bus.

27. The method of claim 26 further comprising optimizing communications for said

20 buffered plurality of digital video signals, said buffered plurality of digital data signals,

said buffered plurality of voice signals and said plurality of upstream communications

across said common shared bus.

28. The method of claim 26 further comprising, generating said plurality of upstream communication with a distribution system.